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Comments from Doug Yeskis

PLANNING DOCUMENTS
PHASE III REMEDIAL INVESTIGATION
ADDENDUM NO. 2
WORK PLAN AND FIELD SAMPLING PLAN

REMEDIAL INVESTIGATION/
FEASIBILITY STUDY

BELOIT CORPORATION
BLACKHAWK FACILITY
ROCKTON, ILLINOIS

FEBRUARY 1995

PREPARED FOR:
BELOIT CORPORATION
ROCKTON, ILLINOIS

• • •

PREPARED BY:
MONTGOMERY WATSON AMERICAS, INC.
MADISON, WISCONSIN

PROJECT NO. 3856.0041

MONTGOMERY WATSON

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INTRODUCTION

This Phase III investigation, as with Phase II, is being conducted under the Additional Work provision of the Consent Decree to satisfy requests made by the IEPA. This Addendum 2 to the Beloit Corporation Blackhawk Facility (site) Remedial Investigation and Feasibility Study (RI/FS) Work Plan provides modifications and additions to the planning documents as amended by Addendum 1. These modifications and additions describe the proposed Phase III activities at the site, that will result in completion of the RI and support of the FS.

The primary objective of Phase III activities is to collect data to adequately characterize the Facility and adjacent areas that will lead to the development and evaluation of final remedial alternatives. Specially, activities required to fulfill this objective includes refining potential migration pathways, further delineation of the horizontal and vertical extent of VOCs in groundwater, and performance of an Ecological Assessment (EA). Previous investigations (Phases I and II) have provided characterization and the nature of a source of VOCs located on Beloit Corporation Property and VOCs in the groundwater, except to the south. EA activities will be conducted to complete collection of information required to finalize the Baseline Risk Assessment, to be prepared by IEPA.

1.1 BACKGROUND

The RI is proceeding in a phased approach, in accordance with U.S. EPA Guidance. The Phase 1 investigation provided preliminary characterization of the site hydrogeology and groundwater quality. In addition, several potential source areas were evaluated. Results from the Phase I investigation identified four potential points of release: in the vicinity of the Beloit Corporation Plant (BCP), the storage yard area (SYA) of the Beloit Corporation property, the foundry sand disposal area (FSDA), and the Fiber Sludge Spreading Area (FSSA). The Phase II investigation eliminated all the potential source areas, on Beloit Corporation Property, except the BCP in the vicinity of well W23, within the BCP and the SYA. In addition, sampling in the FSDA was performed to further characterize the extent of contamination in this area. Also, surficial contamination was evaluated in the FSSA, FSDA and SYA.

The Phase II RI was completed and the results presented in Technical Memorandum No. 2 (Montgomery Watson, March 1995). A meeting was held between representatives of the

Beloit Corporation, Montgomery Watson Americas, Inc. (Montgomery Watson), IEPA, Ecology and Environment (E&E), and U.S. EPA on January 4, 1995 to discuss Tech Memo 2 and to discuss objectives of, and activities for the Phase III investigation.

The Phase III investigation activities are proposed to identify migration pathways from the identified source on Beloit Corporation property in the vicinity of wells W23/W23B (source), and to further define the extent of VOCs in groundwater based on the results of Phases I and II. The Phase III investigation is intended to further characterize the existence of potential migration pathways and extent of VOCs from which final remedial alternatives can be developed and evaluated. EA activities will be conducted to complete collection of information required to finalize the Baseline Risk Assessment, to be prepared by IEPA.

The Phase III data collection activities are to be performed as part of Task 2, Site Investigation, as presented in the Work Plan (Vol. 1, Planning Documents) for the Beloit Corporation Blackhawk Facility, dated June 1992. The Phase III work will be conducted in accordance with this Work Plan Addendum which refers to the IEPA approved planning documents previously prepared for this RI/FS, where appropriate.

1.2 WORK SCOPE

The Phase III work scope is intended to adequately characterize the extent of VOCs in groundwater and their migration pathways in order to develop and evaluate final remedial alternatives. In addition, a survey and possible field sampling will be performed to acquire data required for IEPA to complete the EA.

Phase III activities are based on data presented in Technical Memoranda 1 and 2 and are contingent, based on analytical results, as described below. Investigative locations were selected based on water table maps which have been prepared from water levels collected on a regular basis. An average water table map was presented as Drawing F15 in the Phase II Work Plans. This was based on water table maps presented in Tech Memo 1 and water levels from November 12, 1992, March 9, 1993, May 26, 1993, and August 12, 1993. Similar water levels have been observed since the August 12, 1993 measurements, which make the average water table map still applicable. This map, along with additional rounds of water levels, were used in helping to select investigation locations, as described in Section 2.

The Phase III site investigation will include the following activities:

1.2.1 Extent of VOCs and Migration Pathway Assessment

Phase III investigation activities will be performed in the following areas to adequately characterize the extent of VOCs:

- East property line
- West of the erection bay

- South of the south property line

Activities will include performance of additional water quality borings, well installation and water quality sampling.

1.2.2 Ecological Assessment

The proposed EA sampling conducted during Phase III of the RI will be contingent on results obtained during other investigative activities completed during Phase III as well as results obtained from phases I and II. Investigative activities proposed, west of the erection bay, to further delineate the western extent of VOCs will provide data needed to determine if the proposed EA sampling is necessary. Work may include conducting surface soil sampling west of the source and water quality sampling in the Rock River if VOCs in groundwater are shown to be discharging to the surface or, to the river.

1.3 ADDENDUM FORMAT

Revisions to the original planning documents are presented in sections 2 through 5. These sections are as follows:

- Section 2 - Addendum to the Work Plan
- Section 3 - Ecological Assessment Work Plan
- Section 4 - Addendum to the Field Sampling Plan
- Section 5 - Addendum to the Quality Assurance Project Plan

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ADDENDUM TO THE WORK PLAN

The following text additions are hereby incorporated into the RI/FS Work Plan (Volume 1) of the planning documents for the Beloit Corporation Blackhawk Facility RI/FS.

The following subsections describe the investigative activities to be conducted to further refine the horizontal and vertical extent of VOCs. Proposed boring locations have been chosen based on data gathered during Phases I and II of the RI and are shown on Drawing 10024910-F17.

Additionally, the EA field activities will be conducted with combined efforts of Beloit Corporation and IEPA through their contractors. A description of the proposed EA sampling activities to be undertaken by Beloit Corporation and Montgomery Watson are contained in Section 3.

Proposed groundwater quality borings will be drilled using the dual tube reverse circulation air rotary drilling method. The method is described in the Phase I FSP. Groundwater quality screening will be performed at 10-ft intervals to the top of clay. When the top of the clay layer is reached, a groundwater sample will be collected by pulling the drill rod back, if necessary, to collect the sample as close as possible to the top of the clay layer. In addition to the 10-ft routine sampling interval, groundwater samples will be collected at the upper interface of any significant (greater than 1 ft) clay layers encountered above the depth of the continuous clay layer (70 ft). Groundwater quality samples will be analyzed for VOCs using the GC screening method described in the QAPP. A monitoring well will be installed in the groundwater quality borings, in the zone of highest contamination, only if the VOC GC screening results for that particular boring indicate the presence of VOCs above MCLs in the groundwater. If more than one distinct zone of contamination exceeding the MCLs is detected, an additional well may be installed in that zone of contamination.

Monitoring well construction and development is described in the approved Phase 1 planning documents.

2.1 MIGRATION PATHWAY ASSESSMENT

Phase III investigation activities are intended to determine potential migration pathways for VOCs from the source. The objective of these activities are to further characterize the pathways and to lead to development and evaluation of effective remedial alternatives. Selected locations for investigative activities are based on data obtained during Phases I and II of the RI.

2.1.1 East Property Line

Proposed Phase III investigative activities include conducting one groundwater quality boring along the Beloit Corporation east property line, south of well nest W13/W14 (see Drawing 10024910-F17). Investigation activities in this area are intended to, along with the results of Phase I and II, evaluate and further characterize potential migration pathways in this direction.

Groundwater flow in the vicinity of the east property line is primarily to the southwest, parallel to the property line. However, IEPA has concern that the presence of VOCs in groundwater east of the property line (i.e., well W18 and some private wells untreated water in the southern end of Blackhawk Acres subdivision) indicates that VOCs have migrated east of the property line from the BCP.

Wells along the east property line (wells W13, W14, well nest W22 and well W12R) have shown the groundwater does not contain VOCs. However, well W41, installed near the east property line in Phase II, identified 130 ug/L of PCE in a shallow sand seam at the water table.

If VOCs migrate from W41 east of the Beloit Corporation property line, it would have to occur south of wells W13/W14 (where no VOCs have been detected) and north of well nest W22 (where no VOCs have been detected). Well W2 (a PVC well not sampled during the RI) has not shown VOCs in past sampling rounds.

2.1.2 West of Erection Bay

Investigation activities in this area are intended to determine if VOCs are migrating from the source area towards the Rock River. Results obtained from these activities will also be used to determine whether sampling may be required to complete the EA described in Section 3.

Groundwater levels on the Beloit site, adjacent to the Rock River, range from higher than the river on the northern portion of the site (e.g., at well W17) to lower than the river on the southern portion of the site (e.g., at well W38). This indicates the groundwater discharges to the river (i.e., flows toward the river) on the northern portion of the site and that in the southern portion of the site the groundwater is recharged by the river (i.e., groundwater flows away from the river). Well W6 is shown to be in the transition zone because the groundwater level fluctuates from slightly above to slightly below the river stage.

If groundwater from the source of VOCs (i.e., the vicinity of well W23) flows to the west, it would have to occur in an area where the groundwater level is greater than the river stage. This area changes through time, but has always been shown to be north of the vicinity of well W38

and W21, and sometimes north of well W6. Therefore, groundwater flow from the area of well W23 to the river, if it occurs, would have to occur through the vicinity of well W6. Therefore, VOCs migrating from the source would be expected present in the vicinity of well W6. At times when the transition of groundwater flow towards the river occurs south of well W6, groundwater would flow from the source, towards well W6. Therefore, if there is significant flow from the source area towards the river, VOCs would be present in the vicinity of well W6.

In addition, if groundwater flow discharges to the river, it is expected VOCs would be present at the water table because there would be an upward gradient. Therefore, VOCs, if present, would be present within the first permeable unit below the water table near well W6. Therefore, based on this rationale, well W6 will be sampled to evaluate the presence of VOCs between the source and the river.

what has last sampling of W6 shown?

Well W6 will be sampled for VOCs prior to initiation of the Phase III investigation. Beloit Corporation/Montgomery Watson acknowledges that the IEPA may not accept the results due to well W6 being constructed of PVC. The results are intended to give an indication of the presence of VOCs only. The sample will be collected using procedures and equipment, and screened with a GC, as detailed in the Phase I Field Sampling Plan.

I well does not a qu investigation make!

If there are no VOCs present at well W6, this would indicate VOCs have not migrated this far west. Therefore, well W6 would be abandoned and replaced. The replacement well would then be included as part of Phase III groundwater quality sampling to confirm the screening data.

If there are VOCs present, a mutually agreed location would then be determined to conduct a new boring and well installation further downgradient between well W6 and the river. The boring would be drilled to a short distance below the water table (10 ft) and a grab sample collected and screened using a GC. If VOCs are present, the boring will continue until there are two consecutive intervals with no VOCs detected. Following drilling, a monitoring well will be installed following procedures described above. The boring will, however, not necessarily be completed to the continuous clay layer.

The determination for the location would be based on the concentration of VOCs in the well W6 sample, and groundwater flowlines. The new well, either well W6 replacement or a downgradient well, would then be included in Phase III groundwater sampling. Construction and development procedures for the new well will be in accordance with the approved Phase I Work Plan and Field Sampling Plan.

2.1.3 South of the South Property Line

A groundwater quality boring will be drilled to the top of the clay layer and a well installed following methods described below. The extent of VOCs downgradient of well nests W26 and W3R/W5R is not known. Well nest G108S/G108D to the east and well nest W19/W19B to the west show no VOCs. There is, however, no data to the south/southeast to delineate the extent of VOCs. This will be addressed by conducting a groundwater quality boring downgradient of these wells. Due to concentrations detected in well W26C during Phase II

groundwater quality sampling, and time that has past since, a minimum distance of approximately 300 ft downgradient would be appropriate.

There are several physical interferences downgradient of the well nest that are problematic in locating a boring. To the south of the well nest there is a gravel pit that is not accessible to drilling equipment. The area along the north rim of the gravel pit is too close to existing wells.

To the southeast are Taylor Company and the Rockton Bus Company. The nearest practical placement for a boring would be located directly east, and in front of the Rockton Bus Company. This area is too distal from the property. In addition, there is the potential for intervening sources that could interfere with delineation of VOCs associated with the Beloit Corporation NPL site.

The recommended location for a groundwater quality boring would be in the vicinity of where the railroad tracks split to the west and south (see Drawing 10024910-F17). Placement of the boring is contingent on obtaining access from the railroad.

2.2 GROUNDWATER QUALITY ASSESSMENT

The Round 3 groundwater sampling and analysis will be conducted at the existing and new wells listed in Table 2 of this Work Plan Addendum. The parameters to be analyzed and the intended data uses for this selection are listed in Table 1-3 of the QAPP Addendum (Section 5).

The Phase I Field Sampling Plan presents detailed information regarding groundwater monitoring well sampling procedures and equipment. The groundwater samples will be analyzed for the parameters listed in Table 1-1 of the QAPP Addendum (Section 5). Target compounds and QA objectives for the analyses are described in the approved QAPP.

2.3 INVESTIGATIVE DERIVED WASTES

Investigative wastes (soil cuttings/purgewater) will be stored on-site in dated, labeled 55-gallon drums, pending analytical results. Only wastes from a single boring/well will be in any single drum (i.e., wastes will not be mixed). A running tally of the number of drums used for each location, and total drums of waste will be documented and reconciled.

2.4 LOCATION AND ELEVATION SURVEY

2.4.1 Location Survey

A location survey of all new monitoring wells and soil borings will be performed to provide horizontal ground control. Horizontal locations will be surveyed to the nearest 1 ft and tied to the Illinois State Plan Coordinate Grid System.

2.4.2 Elevation Survey

An elevation survey of all new monitoring wells and soil borings will be performed during the horizontal survey. Elevations of ground surface will be surveyed to the nearest 0.1 ft, top of protective casing and top of well casing will be surveyed to the nearest 0.01 ft. Staff gauges will be surveyed to the nearest 0.01 ft after being reset. Elevations will be relative to the National Geodetic Vertical Datum of 1929.

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ECOLOGICAL ASSESSMENT WORK PLAN

This section describes activities to be conducted in cooperation with the IEPA. The IEPA requested this work plan be submitted to support its EA. The proposed activities will be performed through a joint effort between Montgomery Watson and E&E. Montgomery Watson may perform sampling activities, only if findings of field screening activities performed during the Phase III investigation indicate these sampling activities are appropriate. Beloit Corporation understands that E&E will conduct a site walkthrough which includes a flora and fauna survey. Specific proposed tasks that may be performed are summarized below.

not appropriate. based on GW flow direction & uncertainty of GW flow direction in the middle of one well is not sufficient to determine if COCs are migrating to river. ∴ Not acceptable to base all eco field sampling on screening of one well

3.1 SITE SURVEY

The survey is intended to identify flora and fauna inhabiting the site and to identify potential environmentally sensitive areas. The primary target area for the survey is the wooded area in the western portion of the site along the Rock River. The survey will be performed by E&E with oversight provided by Montgomery Watson. IEPA will provide Beloit Corporation with 14 days notice prior to initiating the survey in order to coordinate activities. Any threatened, endangered, or environmentally sensitive species inhabit the site, if found, the location of the sighting of the fauna or location of the flora species will be noted.

① Will an "official" wetland delineation be performed?

During the site walkthrough, environmentally sensitive areas, specifically wetlands, will be identified. When identified, the approximate location of wetland areas will be determined and indicated on a site map. The location of these areas will be used for possible sampling that may be performed as described in the following subsection.

② Unclear who will do the wetland delineation for M-W or E&E?

③ What criteria/guid. will be used to delineate the wetlands

④ What credentials/training do the delineators have?

3.2 SAMPLING

The proposed, and potential additional sampling activities (as specified in 3.2.1 and 3.2.2) are to determine if there have been impacts to the ecology of the site. Sampling will be conducted by Montgomery Watson with oversight provided by E&E. The primary target areas for proposed and possible additional sampling is the area west and south of the source. The only constituents of concern that have a demonstrated migration potential are VOCs in groundwater.

Should have full TCL/TAL in River

How about FSS? / Gravel pit?

Therefore, sampling in wetland or river areas west of the site will be conducted only if VOCs in groundwater are shown to be present west of the source area (i.e., well W23 only).

Well W6 will be sampled and analyzed as described in Section 2.1.2. The results will be used to determine if VOCs are migrating from the source toward the Rock River. If there are no VOCs present at the well W6 location, it can be concluded no VOCs are migrating to the west and no additional soil or surface water sampling will be performed.

If VOCs are detected at well W6, screening results from the new location described in Subsection 2.1.2 will be assessed.

The VOCs associated with the source impacts groundwater only (with exception of very localized soils that may contain residual NAPL). Unless there is an indication that VOCs are migrating toward the Rock River and potentially identified wetland areas, there is no rationale to perform additional soil sampling in these areas. If there is an indication of VOC migration in groundwater into the wetland area, additional surface soil sampling will be performed as described in Section 3.2.1. Sampling would be performed at mutually agreeable locations where water table and surface elevations indicate the groundwater, containing VOCs, may affect soil in the upper 3 to 4 ft. If the extent of VOCs do not migrate horizontally to where surface elevations create this condition, no further sampling will be conducted.

If there is a determination that VOCs are migrating to and discharging into the Rock River, surface water sampling will be performed as specified in Section 3.2.2. No surface water sampling will be conducted unless the extent of VOCs in groundwater extends from the source area and discharge to the Rock River is possible.

3.2.1 Surface Soil Sampling

Three surface soil samples will be collected, if necessary (see contingency in Section 3.2), in wetland soils in the vicinity of where contaminated groundwater is shown to be present. Locations would be agreed upon between Beloit Corporation and IEPA representatives.

3.2.2 Surface Water Sampling

No surface water sampling would be performed, unless groundwater is shown to be discharging to the river (see contingency in Section 3.2). Samples would be collected according to methods outlined in the enclosed addendum to the Field Sampling Plan. Three surface water samples would be collected from a point upstream, one downstream, and one from the approximate area where discharge to the Rock River may be possible. Handling of and analysis procedures would be performed according to CLP methods described in the approved QAPP. Sample numbers (proposed and potential) and analytical parameters along with rationale for these selections are listed in Table 1-3 of the QAPP Addendum (Section 5).

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ADDENDUM TO THE FIELD SAMPLING PLAN

4.1 SURFACE WATER SAMPLING

Unless data gathered during Phase III investigation activities indicate VOCs are migrating from the source and discharging to the Rock River, surface water sampling will not be conducted. If collected, these samples would be taken as part of the EA to estimate the extent and fate of VOCs and to determine the potential risks, if any, associated with the Rock River to complete the Baseline Risk Assessment. Three surface water samples if collected, would be taken from locations determined to be upstream, downstream and at the point of groundwater discharge.

4.1.1 Surface Water Sampling Methods and Analysis

Surface water samples will be collected by directly immersing the sample bottles along the eastern bank of the Rock River, or by using a stainless steel dipper on an extension rod. Samples to be analyzed for VOCs according to the approved QAPP. Specific conductance, pH, and temperature measurements will be performed on-site during the sampling. In addition, turbidity and color will be observed, and any difficulties encountered while collecting the surface water samples will be recorded in the field notebook.

Measured not observed

alkalinity hardness

The surface water samples will be analyzed as presented in Table 1-1. Surface water samples will be analyzed for VOCs and indicator parameters. Surface water sampling will be conducted using the U.S. EPA CLP requirements for field and laboratory quality control and documentation. Data will be generated under Level IV DQO (Level III for indicator parameters) with data validation. Samples collected during the surface water investigation will be shipped to the Analytical Laboratory using strict CLP chain-of-custody procedures. The stainless steel dipper, if used, will be decontaminated after each use.

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- full TCL/TAL
- TOC
- grain size

① need to add procedures for sediment sampling

② does current FSP have procedures for surf soil sampling?

TABLE 1-1

QAPP Addendum
Phase III Investigation
Sample Type and Estimated Sample Numbers
Beloit Corporation RI/FS

Sample[1] Matrix	Lab[2]	No. of Samples	Field Duplicates	Field[3] Blanks	MS/MSD[4]	Total No. Samples	Test[5] Parameters	Field Parameters
Surface Soils[6]	Enseco	3	1	-	1	5	TCL Volatiles	
Groundwater Screen[7]	Field	18	2	1/day	-	20±	Field GC Volatiles	
Groundwater[8]	Enseco	19	2	2	1	24	TCL Volatiles	pH, Conductivity, Temperature
Surface Water[9]	Enseco	3	1	-	1	5	TCL Volatiles	pH, Conductivity, Temperature

Footnotes:

(1) Samples will be considered low concentration and will be packaged and shipped accordingly.

(2) Enseco Rocky Mountain Anlaytical Laboratory
4955 Yarrow Street
Arvada, CO 80002

(3) A trip blank for VOC analysis will be included with each cooler shipped for aqueous groundwater samples. Trip blanks are not included in the total number of samples.

(4) EXTRA VOLUME REQUIREMENT: Extra volume is reugired for the aqueous MS/MSD quality control requirement (triple volume for VOCs). MS/MSD samples are included in the total number of samples.

(5) Refer to Tables 3-1 and 3-2 for the TCL organic parameter lists and required detection limits.

(6) Refer to Table 1-3 for further detail. This matrix includes surface soil collection that are contingent as described in Section 3 of Phase III Work Plan Addendum 2.

(7) Actual number of samples dependent on number of borings and depths of borings.

(8) Actual number of samples dependent on number of new wells installed. Refer to Table 1-3 for further detail.

(9) These smaples will only be collected if VOCs are indicated to be migrating to, and discharging in, the Rock River.

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TABLE 1

Deep Groundwater Quality Boring and
Monitoring Well Location and Rationale Summary
Beloit Corporation - Rockton Facility RI/FS
Phase III
Rockton, Illinois

Well/Boring Number	Approximate Depth	Approximate[1] Location
Deep Borings		
W42C	(2)	East property line.
W43C	(2)	Downgradient of well nest W26/W26C.
W44C (3)	(4)	West of Erection Bay.
Surface Soil Sample Locations		
SS17 through SS19 (5)	0-6 in. Good	To be determined.
Surface Water Sample Locations		
SW1 through SW3 (6)	0-6 in. probably ok for now	To be determined.

Need to add sediment samples

(1) See Drawing F17 for proposed boring and well locations.
(2) To the continuous clay layer at an approximate depth of 70 ft.
(3) Groundwater quality boring will be conducted only if well W6 screening results indicate VOCs are present.
(4) Determined by the presence of VOCs.
(5) Surface soil location and number of samples dependant on data gathered during the investigation.
(6) Surface water will be collected only if discharge of VOCs to the river is indicated.

NOTES:
SS = Surface Soil
SW = Surface Water

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TABLE 2

Summary of Analytical Parameters (1)
Phase III Work Plan Addendum
Beloit Corporation-Blackhawk Facility
Remedial Investigation/Feasibility Study

Well ID	GC Field Screening Volatiles (water)	TCL Volatiles
Existing Groundwater Monitoring Wells		
W03R		X
W05R		X
W06 (2)	X	
W06R (2)		X
W13		X
W14		X
W16R		X
W18		X
W21		X
W21B		X
W23		X
W23B		X
W25C		X
W26C		X
W31C		X
W32		X
W34		X
W41		X
G103D		X
G108D		X
Proposed Groundwater Wells		
New Wells (3)		X
Proposed Groundwater Quality Borings		
W42C	X	
W43C	X	
W44C (4)	X	
Proposed Surface Soil Samples (5)		
SS17		X
SS18		X
SS19		X
Proposed Surface Water Samples (6)		
SW1		X
SW2		X
SW3		X

(1) This table presents a summary of analytical parameters for Phase III of the Beloit Corporation Blackhawk Facility RI/FS. An "X" indicates the well is to be sampled for the indicated group of analytical parameters. A blank space indicates the analysis will not be performed during Phase III. The following discussion details the rationale for parameter selection.

(2) GC screening results will determine if well W6 will be abandoned and replaced with well W6R or, if groundwater quality boring W44C is conducted.

(3) Number of proposed monitoring wells are dependant on deep groundwater quality boring field screening results. The TCL volatiles will be analyzed in Phase III samples collected from the newly developed monitoring wells, as presented in the Proposed Groundwater Monitoring Well section of this table.

(4) Groundwater quality boring W44C will be conducted only if well W6 screening results indicate VOC's are present.

(5) Surface soil samples may be collected at 3 locations, contingent as described in Section 3.2 of Phase III Work Plan Addendum 2. These samples will be analyzed for TCL volatiles, if collected.

(6) Surface water samples may be collected from the Rock River if indications suggest groundwater is discharging to the river.

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TABLE 1-3

QAPP Addendum
Phase III Investigation
Summary of Data Generating Activities and Associated Quality Objectives
Beloit Corporation RI/FS

Activity	Description	Intended Data Usages	Parameters	Data Quality Objective	Anticipated No. of Investigative Samples
Surface Soils	Collect and analyze 3 surface samples for TCL volatiles if appropriate. See Work Plan Section 3.	Determine presence of VOCs in soils in groundwater discharge area.	TCL Volatiles	Level IV Data	5
Deep Soil Borings	Drill 2 to 3 deep borings. Collect and analyze groundwater at 10-ft intervals for VOCs. See Work Plan, Section 2 for selection criteria.	Soil borings will be used to characterize site geology, and screen groundwater for VOCs with changes in depth.	Field GC VOC (Water)	Level II Data	20(1)
Groundwater Sampling	Round 3 sampling of 19 monitoring wells for TCL, volatiles (see Table 2 of Work Plan Addendum No. 2 and Table-11 of QAPP Addendum 2.	Characterize and evaluate the extent of VOCs in groundwater.	TCL Volatiles	Level IV Data	24(2)
Surface Water Sampling	Collect 3 surface water samples.	Ecological Assessment	TCL Volatiles	Level IV Data	5

Footnotes:

(1) The number of investigative samples is contingent on the number of boring locations as specified in Phase III Work Plan Addendum.

(2) The number of groundwater samples collected is contingent upon the number of wells installed in the deep groundwater quality boring program.

(3) Surface water samples will be collected only if VOCs are indicated to be migrating to, and discharging in the Rock River.

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